What is claimed is:

1. A magnetic recording apparatus comprising:

a magnetic head mounting single pole head having a main pole and an return pole;

a magnetic recording medium having a magnetic recording layer in which a magnetic pattern is recorded using the single pole head;

a motor for rotating the magnetic recording medium; and

a recording driver for supplying a recording current to the single pole head, wherein the current waveform of the recording current supplied from the recording driver to the single pole head includes a first pulse exceeding a current amplitude at which the magnetic recording medium can be recorded, and a second pulse of the opposite polarity to that of the first pulse, the second pulse exceeding the current amplitude at which the magnetic recording medium can be recorded, wherein the current value between the first and second pulses is smaller than the recordable current amplitude.

2. The magnetic recording apparatus according to claim 1, wherein the current value between the first and second pulses passes through 0 mA and becomes asymptotic to 0 mA.

3. The magnetic recording apparatus according to claim 1, wherein the current value between the first and second pulses passes through an intermediate value between a peak current value of the first pulse and a peak current value of a second pulse and becomes asymptotic to the intermediate value.

4. The magnetic recording apparatus according to claim 1, wherein a relationship $T > W > T - WB/v$ is satisfied, where W is the time in which the first and second pulses exceed the current amplitude at which the magnetic recording medium can be recorded, T is the time length of the recorded pattern, v is a relative transport

speed of the magnetic head in the track direction of the magnetic recording medium, and WB is a write bubble size.

5. A magnetic recording method for recording information on a magnetic recording medium by forming a magnetic recording pattern using a single pole head comprising a main pole and a return pole, comprising the steps of:

supplying a first pulse current to the single pole head, the first pulse current exceeding a current amplitude at which the magnetic recording medium can be recorded; and

supplying a second current pulse to the single pole head, the second current pulse having an opposite polarity to that of the first pulse and exceeding the current amplitude at which the magnetic recording medium can be recorded, wherein

the current value between the first and second pulses is smaller than the recordable current amplitude.

6. The magnetic recording method according to claim 5, wherein the current value between the first and second pulses passes through 0 mA and becomes asymptotic to 0 mA.

7. The magnetic recording method according to claim 5, wherein the current value between the first and second pulses passes through an intermediate value between a peak current value of the first pulse and a peak current value of the second pulse, and becomes asymptotic to the intermediate value.

8. The magnetic recording method according to claim 5, wherein a relationship $T > W > T-WB/v$ is satisfied, where W is the time in which the first and second pulses exceed the magnetic recording medium-recordable current amplitude, T is the time length of the recording pattern, v is a relative transport speed of the

magnetic head in the track direction of the magnetic recording medium, and WB is a write bubble size.